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ABSTRACT

California's 1980 proficiency law, which is the topic of this report, mandated that each school district was to adopt or construct tests and establish standards for assessing proficiency in reading, writing, and computation on tasks that were necessary to success in school and in life. In order to graduate from high school, a student must have passed the tests (a student who fails once at the middle school level can try again twice more in high school). This report presents findings of several comparative and experimental studies that investigated three aspects of the proficiency assessment: tests, remedial courses, and changes in implementation of the law. The report also offers recommendations to help school district proficiency programs result in more economical, more equitable, and higher quality education. Sections of the report deal with the following topics: (1) an executive summary, which provides results of the statewide comparison; (2) historical background on proficiency testing; (3) national variation in proficiency assessment; (4) California's proficiency law; (5) proficiency assessment methods; (6) initial consequences of proficiency assessment; (7) a comparison of New York and California's solutions to proficiency assessment of basic skills; (8) a report on improving student performance for passing a minimal competency test in reading; and (9) a course-based model for proficiency assessment. (SKC)

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Proficiency Assessment and Its Consequences

Harry Singer and Irving H. Balow

University of California, Riverside

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Final Report

1987

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Contents

Section	Page
Preface	i
Executive Summary	1
Historical Background	23
National Variation in Proficiency Assessment	26
California's Proficiency Law	28
Proficiency Assessment	33
Initial Consequences of Proficiency Assessment	38
Research on Proficiency Assessment	
Comparison of New York and California's Solutions to Proficiency Assessment of Basic Skills	43
Improving Student Performance for Passing a Minimal Competency Test in Reading: Are Remedial Classes More Effective than Regular English Classes	56
A Course-Based Model for Proficiency Assessment	70

Preface

California's proficiency law went into effect in 1980. Enough time has elapsed to determine how the law has been implemented. We were mainly interested in obtaining the answers to three questions.

What were the consequences of local control over assessment? Specifically, we wanted to know the degree of variability in the reliability of the instruments and the standards set for passing proficiency tests.

School districts had to establish remedial proficiency courses. We wanted to know the effectiveness of these courses. We knew from a state report that school districts were not training teachers for them. Would the remedial course be more effective than a regular English course in developing students' performance in reading? We conducted an experimental study in one school district to answer this question.

The proficiency law allows for local control and therefore for change in the way the law is implemented. We wondered whether school districts had changed their proficiency programs over the past eight years. We interviewed a sample of school districts and discovered that one large district had made a dramatic change in its proficiency program, from a single-test to a course-based model. We decided to do a case study of this district. We were fortunate we could obtain taped data from the district on student performance under the old and the beginning of the new program.

To evaluate proficiency programs, we used three criteria: economy, equity, and quality. We focused on whether the changes in proficiency programs were in the direction to satisfy these criteria.

Essentially our study consists of data on proficiency tests collected

from a variety of school districts, an experimental study of remedial instruction in one school district, and a case study of one of California's largest school districts. We also had all the State Department of Education's annual reports on proficiency assessment. But only the first report was based on questionnaires returned from a large enough sample of school districts to be representative of the State of California. In all subsequent reports, very few school districts responded to the questionnaires. Therefore, we drew our statewide information only from the initial report to inform us of the initial consequences of proficiency testing in California.

We do not claim that our study is based on representative data from the entire State of California. What we do claim is that our data provided us with information that supports the recommendations made in our report.

A study of this magnitude requires contributions from many persons. We are grateful to the school districts that provided data and information to us: Oakland, Newark, Los Angeles, Riverside, and San Diego. Also, some 10 other districts provided data for our reliability and grade standards study. We are particularly appreciative of the cooperation of Dr. Ross Green and Larry Slayton, McGraw Hill/CTBS, for providing test data stored there for the Los Angeles Unified School District. Linda Purcell, Assistant Director of Research for the Los Angeles Unified School District, furnished us with information about her school district's proficiency program. Dr. Robert T. Ferrett, Director of Research and Evaluation for the Riverside Unified School District, participated as a co-researcher in the Riverside study. Dr. Mark Jensen, also a member of Riverside's Office of Research and Evaluation, analyzed the data for this study. Several conversations with Kermit "Punky" Fristrom, Director of Basic Skills, San

Diego Unified School District, clarified its course-based model. Linda Covington provided data tapes for our analysis of San Diego's proficiency program. We also received all the statewide status reports on proficiency testing from Norma Leonard, State Department of Education's Proficiency Standards Department. UCR Graduate Students Stephen Simonsen and Karen Burrell provided bibliographic information. The taped data were analyzed by Dr. Alexander Ramirez, consultant, UCR Statistic Department. Rosie Russell, Management Service Office for UCR's School of Education, was in charge of the budget for this project. We also appreciate the support this project received from Dr. Karen Paget, Director, California Policy Seminar, Institute of Governmental Studies.

Most important, we wish to thank all the students who unknowingly participated in this study because data on them were forwarded to us by their school districts. We hope that the information in this report and our recommendations will be beneficial to California legislators, to school districts, and particularly to students who are the ones held most accountable by proficiency assessment and its consequences.

Harry Singer

and

Irving H. Balow

Final Report

Proficiency Assessment and Its Consequences

Harry Singer and Irving H. Balow

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Executive Summary

The purpose of this study was to investigate three aspects of California's proficiency assessment: tests, remedial courses, and changes in implementation of the law. This executive summary contains the results. We conclude the summary with recommendations that can make school district proficiency programs more economical, more equitable, and result in higher quality education.

California's Proficiency Law

California's proficiency law went into effect in June 1980. The law mandated that each school district was to adopt or construct tests and establish standards for assessing proficiency that were to include but not be limited to the basic skills of reading, writing, and computation on tasks that were necessary to success in school and life experiences. Tests were to be administered once in grades 7 to 9 and again in grades 10 and 11. Once students passed the tests they did not have to take them again. Only students who had passed the tests by graduation time could receive a high school diploma. Students with diagnosed learning disabilities could have alternate means for passing the proficiency tests.

Background for Proficiency Law

The proficiency law arose as a result of social, economic, and

political shifts in attitudes. A social promotion policy had gone into effect in schools in the 1950s which resulted in students being promoted regardless of their achievement levels because studies indicated they performed better in subsequent classes than if they had been retained. The Civil Rights revolution of the 1960s resulted in more students staying in school till graduation from high school. Minority parents were concerned lest their children be passed through school without standards for achievement and majority parents were concerned lest the standards drop. Taxpayers complained about the increased cost of educating the larger number of high school students. Some reaction had already occurred to the Civil Rights revolution. For all of these reasons, a demand arose that teachers "be held accountable" for development of basic skills. Beginning early in 1970, legislatures throughout the country began to pass competency laws. By 1980, when California's proficiency law became effective, some 38 states had also adopted proficiency laws, but they varied in their particulars considerably from state to state.

Consequences of California's Proficiency Law

1. What are the consequences of the State of California opting for local control over proficiency assessment of basic skills?

Most school districts elected to construct their own tests to assess competency in basic skills. They wanted their tests to contain academic and life tasks that had curricular and instructional validity. They also wanted to economize on the cost of testing, especially because the tests have to be administered at least three times. Moreover, they wanted more than two forms of each proficiency test so that they could maintain test security.

To determine the measurement characteristics of the tests, we secured

and analyzed test data from a variety of school districts. We found that the tests varied widely in reliability from a low of .58 in one school district to a high of .93 in another. The low reliability means that 20 percent of the students who failed the test would have passed it had they taken it over and 20 percent who had passed it would have failed it on a second trial. Unfortunately, the students who failed the test were most likely placed in a district-mandated remedial class before they could take the test over. Higher reliability was related to whether a school district had a research and evaluation department with a director trained in tests and measurements.

Variability exists not only in test reliability but also in test difficulty. When district constructed test data were compared with the school district's own standardized test results, the grade level difficulty of the reading tests varied from grade 5.5 to 8.8. The variability in standards for mathematics competency was even greater, from grade level 6.0 to 11.6. In other words, a student could pass a proficiency test in one district and fail in another with the same grade equivalent scores because of the variability in standards from district to district. Therefore, to know the competency level of a student, it is necessary to know his or her school district's competency standards in basic skills.

The standards used for passing in a district determine how many students will be placed in remedial classes and how many will be eligible for a diploma. Districts with low standards would have a smaller number of students enrolled in remedial courses and all or almost all its students passing the competency tests required for a high school diploma. Districts with high standards would have many students in remedial classes, more students at risk in ultimately qualifying for a diploma, and a greater allocation of resources for remedial courses.

Effect of Proficiency Assessment on Students

The State Department of Education reported that when proficiency assessment began in 1981 that 38 percent of the ninth graders had failed the reading test, 52 percent the writing test, and 46 percent the math test. These data imply that the general standard for passing a proficiency test was about the 50th percentile on a ninth grade test. Also, the writing test was the most difficult and the reading test the easiest.

Proficiency testing established a three tier system in high schools. Students in proficiency classes constitute one tier. Students who passed proficiency tests but who were not in the college prep program make up the second tier. Students in the college prep and honors courses are members of a third tier. Although high schools had eliminated tracking, the onset of the proficiency law brought a kind of tracking back into the high school.

Cost of Proficiency Testing and Remediation

Since there are approximately 400,000 students per grade in California, the failure rate means that 152,000 students were eligible for a remedial reading class, 208,000 a remedial writing class, and 186,000 a remedial math class. In modules of 25 students per class, the number of remedial proficiency classes required would be 21,800. On a five period teacher day, 4,360 teachers would be devoting their time to teaching remedial courses. If the eleventh and twelfth graders enrolled in remedial class were included, these figures would, of course, be much higher.

Computed at the rate of $20,000 per teacher, the cost of the remedial classes for the tenth grade alone is approximately $87,000,000. If

remedial courses were offered only in the summertime when the state reimburses school districts for such courses, the courses would also include 11th and 12th graders; then the estimated bill to the State would run over $100,000,000 without counting costs for mandatory conferences with parents and for the testing program itself.

The cost of testing is high. When the test is first given in grades 7 to 9 about one school day is required for the three tests. If we simply prorate the cost of education for one grade per day, we would compute the cost as 1/180 of a school year. Since the cost per grade is roughly 1/12 of $12 billion, the cost of a single day is 1/180 x $1 billion dollars. The result is that the cost of testing is about $6,000,000. Since the law requires competency tests also be given in grades 10 and 11, the total cost is probably as high as $12,000,000.

Can the cost of testing be reduced?

Yes. Most school districts also administer standardized tests that assess achievement in basic skills. If they can use the standardized test results for determining proficiencies, then the duplication in assessment would be eliminated, thereby reducing the cost of testing.

However, some school districts believe that standardized tests do not assess "life tasks." Consequently, they may be reluctant to use standardized tests for assessing proficiency because they might be in violation of the proficiency law. Removal of "life tasks" from the law would enable them to eliminate this barrier.

Inequity in Proficiency Assessment

An inequity exists in determining whether students with diagnosed learning disabilities, essentially students in special education classes, have satisfied requirements for minimal competency. Since they do not have

to take the district-wide proficiency tests and can satisfy the requirements by some alternate means, then it is possible that students in special education could obtain a diploma with lower competency requirements than students in regular classes who failed the district-wide test but attained higher achievement in basic skills than students in special education classes. The legislature has let the school districts decide how to handle this issue. Many districts have decided that special education students who have satisfied their individual educational plans are entitled to a diploma. Therefore, to evaluate a student's competency it is also necessary to examine a high school graduate's transcript in order to know what course of studies was followed to meet the course requirements for the diploma.

If the State of California wants its citizens to know that all students who receive a high school diploma have attained at least the same minimal proficiency level in basic skills, then it would need to construct or adopt a statewide test. However, the legislature has clearly indicated it does not want a statewide test. It wants local school boards to be responsible for proficiency test characteristics and standards for proficiency assessment.

In contrast, New York has a uniform standard for assessing proficiency. Although it has adopted its own statewide proficiency tests, it allows an alternative for local school districts. They can use a nationally standardized test they normally use for evaluating achievement for assessing competency in basic skills. Students who score on their school district's standardized test at the 50th percentile or higher at the 7th, 8th, or 9th grade levels have passed the proficiency test requirement and do not have to take the State's test. Presumably the State adopted test has been equated with school district standardized tests. If so, then New

Yorkers know that a diploma from any New York high school signifies that the diploma holder has attained at least the upper 50th percentile on a test standardized for grades 7, 8, and 9.

2. Is a remedial course in reading an effective way to improve student performance on a school district's proficiency test?

To answer this question, we conducted an experimental study in the Riverside Unified School District. Reading development consists of two overlapping components: learning how to read and using reading to gain new information. Because of the overlap in these two phases of reading development, we cannot have a test that operationally defines mastery of reading acquisition. But we can develop a consensus that a particular grade equivalent on a standardized test indicates a student has learned how to read.

We selected a paragraph and its accompanying questions from the Stanford Achievement Test (1973 edition). The paragraph was beyond the student's direct experiential level; it was about a Greek myth. If a student could answer all the questions on this test up to this paragraph and two more on this paragraph, then he would have attained a grade equivalent of 5.5. Without telling the high school principals in Riverside the grade level of this paragraph, we had them read it and look at the comprehension questions that accompanied it; they agreed that if a student could read and comprehend this paragraph, he knew how to read.

We then had the school district's Director of Research and Evaluation who cooperated in this study obtain a sample of students who had learned how to read according to our consensus criterion but who had failed the district's reading proficiency test administered in the ninth grade. All of these students, according to district policy, would have gone into reading remedial classes in the fall. Although we would have preferred

random assignment of these students to our experimental and control group treatment, we followed district policy by giving all of their parents a choice for their children's placement: either a remedial reading class or a regular English class for the next year.

The students placed in the regular English classes constituted the experimental group; those in the reading remedial classes were the control group. We did not intervene in any way in either the English classes or the reading remedial classes. The question we wanted to answer is which group would perform better on the retaking of the district's reading proficiency test given at the end of the year.

Students enrolled in the regular English classes performed significantly better than the remedial students when they retook the reading proficiency test at the end of the year. The difference was statistically significant; indeed, the difference was such that the odds that it had occurred by chance were 19 to 1.

The results are just opposite of expectation if the rationale for a remedial class is valid. A remedial reading class is supposed to develop a student's competency in reading better than a regular English class because the remedial class concentrates on developing the reading competency whereas the regular English class emphasizes literature and essay writing. Moreover, the remedial reading class instructors receive the test objectives failed by each student. However, we observed that both the regular English and the remedial reading classes do not differentially teach students. Instead, they assume the classes are homogeneous; therefore, all the students in them get the same assignments.

Because the size of the sample in the study was small, the school district may want to conduct the study again. If the same results are attained, then the recommendation is that students who are beyond the

reading acquisition level but fail the district's competency test should be placed in regular English classes. Those who fail the test but are below the reading acquisition level should go into remedial classes where learning how to read is emphasized.

The district can then reallocate the money it spends on remedial reading classes to regular English classes and thus maintain class size. Since State law requires school districts to offer remedial courses, but does not require students to take them, local school boards already have the option of adopting this policy.

Questions that might be raised for further research is whether a self-selective bias might have affected our results? Were the students who opted for regular English classes more motivated to learn and achieve? Another question is what would happen if we trained English teachers to teach towards a wider range of individual differences in reading achievement? Would our experimental group perform even better then? What if we trained teachers to differentially diagnose students and base their instruction on this diagnosis instead of giving them all the same workbook type of instruction on so-called "life tasks" that are so specific that the students may never encounter them again.

Even though a multitude of questions over our results might arise, the study can be defended on logical grounds. We think that differentially treating students who fail the district's reading proficiency test but who are beyond reading acquisition versus those students who are still learning how to read is a more effective way of improving student's reading proficiency than putting both groups into the same remedial reading class. Our explanation for the significant improvement of the students in the regular English classes is that these classes provided them with higher expectations and more challenging curriculum that enabled them to expand

their general knowledge and vocabulary ability better than they would have done in remedial reading classes. We know that general knowledge and vocabulary ability are two of the most important factors for improving students' reading comprehension.

The results of our Riverside results are applicable to school districts that have similar remedial reading policies and reading proficiency tests. In our sample of school districts, we found three types of programs. Hence, we know that the results obtained in Riverside do not apply to all school districts in the State.

However, our recommendation is that all school districts differentiate students who fail their reading proficiency test into at least two groups: those who are beyond the consensus reading acquisition level and those who are below it. Those above it can benefit from instruction that will enable them to expand their general knowledge, vocabulary, and higher level thinking skills (inference, interpretation, critical evaluation) and those below it need differential diagnosis and instruction in reading acquisition. (Note: the consensus on when reading acquisition has been attained could be reduced to reading grade equivalent 4.5 on the Stanford Reading Achievement Test; we chose 5.5 as a more conservative estimate.)

3. Have any changes occurred in proficiency assessment and remedial instruction over the past five years?

We interviewed all the school districts in our sample. We found changes have occurred in what some school districts are now doing in proficiency assessment and development of students' proficiencies in basic skills. The smaller districts tend to be relying on their original way of complying with the proficiency test law. For example, the Riverside Unified School District, an intermediate size school system, is still administering its own competency test and has students who fail the

district's test take remedial classes. In contrast, the Los Angeles Unified School District has changed from administering the separate competency tests it developed to using as its competency tests a subset of items from the district-required standardized test, the Comprehensive Tests of Basic Skills. In other words, instead of giving both the standardized test and the proficiency tests, it now gives only the standardized test and has it do double duty. Thus, Los Angeles saves on the cost of testing. However, it still has remedial classes for students who fail the competency subtests of the Comprehensive Tests of Basic Skills.

The greatest change has occurred in the San Diego Unified School District. San Diego has dropped its single test model for assessing competency in basic skills in favor of "course-based testing." All 23 courses required for graduation have proficiency criteria formulated within each course. The instructor determines whether students have met the criteria. A passing grade in a course, which is D- or better, indicates the student has met the competency requirement for the course. Students who get an F in any of the courses are invited to attend a conference with their parents and must retake the course to pass the competency requirements and meet the course requirements for graduation. They may also get additional help for passing the course. Although a relatively high percentage of students fail proficiency tests, only 10 to 12 percent of the students fail any one course, probably because the course specifically prepares students for passing its specific course-based tests. Thus, San Diego has eliminated the single competency test and made competency standards and course requirements for graduation and receipt of a diploma synonymous. It will not have any students at graduation from high school who have passed course requirements but did not pass competency test requirements.

The San Diego proficiency plan seems to provide for greater efficiency, equity, and improved quality of education. The efficiency occurs in the elimination of a single test for assessing competency that was cost-ly to administer and required one school day. In a sense, the new proficiency standards require more assessment since it occurs in 23 courses, but the cost is less because the assessment is part of the instructional program.

Remedial proficiency courses were also eliminated. The remedy for students who fail a proficiency course required for graduation is to retake the course. When students do fail a course, they and their parents are invited for a conference that might also lead to additional help in passing the required course. If remedial work in basic skills is indicated, it does not replace, but supplements the required course.

The new program is equitable since all students receive the same instruction and therefore can learn the required skills and knowledge. In short, San Diego does not use remedial classes as a kind of tracking program. Students also get the same standards, that is, a student who takes English from one instructor has the same proficiency standards as a student who has a class in English from another instructor. Moreover, the proficiency standards are likely to be more valid because they are integrated into each course.

The change may have also improved the quality of education because the instructors in these courses had to explicate the requirements for proficiency and plan instruction for development of students' basic skills.

San Diego has already switched to a course-based model for proficiency assessment and has already completed one year under the new model. Recently, some 10 school districts in California announced plans to adopt a course-based model.

4. Has the proficiency law contributed to rate of dropouts from high school?

We do not have any information that directly answers this question. We note that in the State Department's 1981 Proficiency Assessment Report an 11 percent dropout occurred between the 11th and 12th grades for students who had still failed their district's proficiency tests. Whether the dropouts were wholly or in part attributable to fear of further failure to pass the proficiency tests and accompanying embarrassment over not receiving a high school diploma could only be determined by interviewing the dropouts. That would entail a separate study.

5. Has the proficiency law improved the quality of education in California?

Quality of education is dependent on a multitude of factors. The factors range from the kind of instruction offered by individual teachers to the type of curriculum required for graduation. A single test is only one of many components that may affect the quality of instruction. Therefore, we cannot attribute improvement alone to the advent of proficiency tests.

However, school districts reviewed their curricula when the proficiency law went into effect in order to make sure that their proficiency tests had curricular and instructional validity. That is, they determined that the skills required on the competency test were included in the curriculum and taught in regular classes so that they would not be legally liable for requiring on competency tests skills or content that had not been taught in regular classes. Thus, the review might have improved the quality of students' education in basic skills.

The San Diego competency plan involves use of competency standards in all the courses required for graduation. The incorporation of these

standards into courses may have improved the quality of education in these courses in relationship to basic skills. Hence, the competency law can take credit for being a factor in effecting this improvement in San Diego.

We can narrow the question to what has been the effects of the competency program on development of basic skills? Our Riverside study indicates that the remedial course requirement was not as effective as placement in a regular class in improving the basic skills of students who had learned how to read but did not pass the proficiency tests when they were first offered. On this criterion, the quality of education in the remedial class was lower than in the regular classes.

Although we did not study students who had failed the competency test but were below grade 5.5 on a standardized reading test, we could infer from the curriculum in these courses that it was not designed to meet the needs of these students. What they needed was diagnosis of their reading difficulties and instruction in how to read. They were not being diagnosed nor were they getting appropriate instruction for their needs. Hence, the competency program appears to have had an adverse effect upon the quality of education of students enrolled in the remedial program.

6. How has proficiency assessment affected students in general and ethnic groups?

In general, about one third to one half all students fail one or more proficiency tests when they are first administered in grades 7 to 9. The variation in the failure rate reflects differences in locally adopted standards. As we pointed out above, some school districts have a lower standard and hence less failure while other school districts have higher standards and consequently more failure.

The standards can also vary among the competencies. For example, a district may have a more difficult and more stringently graded writing than

a reading standard. Another district may include mathematics up to geometry, a tenth grade level of mathematics, while other districts may only include mathematics through percentages, a seventh grade level of mathematics. Therefore, we cannot generalize about relative performance on the basic competencies.

The four major ethnic groups in California are Anglos, Asians, Blacks and Hispanics. Anglos and Asians perform much better on these tests than do Blacks and Hispanics. For example, passing percentages on competency tests in reading, writing, and mathematics for students in San Diego are shown in Table 1.

Table 1. Passing percentages on competency tests for four ethnic groups assessed in the eighth grade in one large school district

	Anglos	Asians	Blacks	Hispanics	
Reading	61	60	27	34	
Writing	30	28	18	18	
Mathematics	42	58	16	23	
Total No.*	2740	162	973	1025	4900

* Total number varies somewhat from test to test.

The table shows for all groups that they perform better on reading than mathematics and better on mathematics than on writing. The Anglos and Asians are about equal on all tests except mathematics where the Asians excel. The Blacks and Hispanics are approximately equal to each other but about 30 percent lower in reading, 12 percent lower in writing, and 20 to

25 percent lower in mathematics than the Anglo group.

Thus, a disproportionately large number of non-Anglo and non-Asian students are enrolled in remedial classes. Do these results indicate that the tests "work against" the minority groups other than Asians? Indeed, the opposite argument can be made if the students enrolled in the remedial classes get instruction more appropriate to their needs than they would get in regular classes. These needs are for diagnosis of their difficulties on the competency tests and instruction that will help them in their subsequent academic classes. However, completing workbook type assignments in "life-skills" does not meet remedial students' needs for performing better in their academic classes. They will be taking academic classes for the next three years and need to pass them along with their competency tests in order to obtain a diploma. Therefore, remedial classes which do not diagnose nor teach skills required for performance in academic courses do work against the higher proportion of minority groups enrolled in remedial courses.

The proficiency law currently requires school districts to adopt standards of proficiency in basic skills "necessary to success in school and life experiences" (Education Code 51215). The legislature ought to eliminate the phrase "life experiences." This phrase has been interpreted to mean "academic tasks" and "life tasks." Consequently, most school districts devised assessment measurements and organized remedial classes for both of these tasks.

An alternative to having the legislature change the wording would be for school districts to interpret that academic tasks in basic skills <u>are</u> life experience tasks. For example, learning how to read and how to use reading ability to learn from texts are not only academic but also life tasks. Apparently Los Angeles made this interpretation in its testing

program because it now administers only a standardized achievement test for assessing proficiency in basic skills. San Diego uses only academic tasks in its course based model.

Recommendations for Improving the Proficiency Assessment Program

What recommendations can be made to the legislature that will enable it to formulate and pass laws governing assessment of student progress in basic skills that will improve performance in these skills and thus enhance the quality of education in California?

In general, no new laws or modifications in the current proficiency law are necessary for bringing about improvements in the proficiency assessment program. School districts can adopt all the changes we recommend simply by a broader interpretation of the current law.

However, if the legislature did change the law, then all school districts would be required to comply and would not have to strain their interpretations of the law. Therefore, we recommend the following minor changes in the law. The changes will affect school districts that use the single-test model, not the San Diego course based model.

1. Assessment.

The current law requires establishment of standards for basic skills necessary to "success in school and life experiences...." The wording should be modified to read:

> "Such standards shall include, but need not be limited to, reading comprehension, writing, and computation skills, in the English language, necessary to success in school."

Then school districts would not need to administer competency tests that assess "life experience" tasks nor remedial courses that teach them. Instead, school districts could use their district-adopted standardized

tests for assessing proficiency in basic skills and could emphasize instruction in remedial classes that will prepare students to perform better in the academic courses they will be taking in high school to meet the graduation requirement.

2. Remedial classes.

School districts currently must set up remedial classes for students who have failed proficiency tests. But basic skills consist of two components: an acquisition component in which students learn how to read, write, and compute and an application component in which they use their basic skills to acquire new information, write essays and solve quantitative problems. When passage of a proficiency test in reading is set at the ninth grade level, it goes beyond students' acquisition of the basic skill to use of their basic skill plus their general knowledge and their reasoning ability to obtain knowledge from texts. To differentiate the two components, the wording of the law should be changed to read that districts are required to offer "remedial classes for students who are below the acquisition level in any basic skill."

To implement this law, the legislature should mandate that each local school district adopt consensus definitions of when students have achieved an acquisition level in each basic skill. The law may be worded in the following way for the reading competency test:

> Local governing boards are to adopt by consensus a criterion for the reading grade equivalent on a standardized test that indicates students have learned how to read. Those students who fail their school district's reading proficiency test may have differential instruction according to whether they are or are not beyond the consensus level of reading acquisition. Those above it may have

instruction in regular classes so that they will have the educational opportunity to expand their general knowledge, vocabulary ability, and higher level thinking skills; those below it may receive individual diagnoses in reading acquisition and provided with appropriate treatment until they have reached the consensus level of reading acquisition and can then be placed in regular English classes.

Consensus definitions can also be formulated for writing and mathematics. Although both of these competencies also have acquisition and application components, the boundary line between them is less clear for writing. The level of mathematics students have to acquire for subsequent application is also debatable, but mathematics up to algebra may be an appropriate minimum. Consequently when local school districts arrived at their consensus definitions or standards, they could and do vary considerably. We can only suggest that they consider using a criterion of the 50th percentile for passing tests in writing and mathematics on district-constructed tests at the eighth grade level or passing a standardized test at the eighth grade level with a stanine score of 5 or better in each of the basic skills. Of course, a lower or higher grade level could be selected. We chose the eighth grade level because we found that several school districts used this level. It is approximately the level at which students of IQ 75 or higher should be able to succeed on the competency tests by the time they reach the 12th grade.

However, changes do not have to be made even in the wording of the proficiency law to satisfy our recommendations. If academic and life tasks in basic skills can be equated, then changes could be obtained simply by directing the State Department of Education to send guidelines to school districts that would sanction the recommended interpretation and thus

effect an economy in their proficiency assessment programs by enabling them to use their standardized achievement tests for double duty. School districts would maintain local control and option over the recommended changes.

State Department Guidelines

1. For economy in proficiency assessment, school districts can use a standardized test, as the Los Angeles Unified School District is currently doing. For even greater economy, they could adopt the San Diego plan and use a course-based model in which standards for basic skills are applied within courses required for graduation.

2. Since school district competency tests vary in reliability and validity, school districts that give their own competency tests should also specify an equivalent cut-off score on a nationally standardized test that has high reliability and curricular validity as meeting its proficiency standards. Students could satisfy the proficiency requirements by passing either the school district's proficiency tests or its standardized test at the equivalent level.

3. Although school boards and representative community groups set standards for proficiency tests, they were not guided to differentiate acquisition versus application of basic skills for purposes of remediation. Remedial classes should be for students who have not learned how to read, write, or compute. School districts should adopt a consensus definition for acquisition of basic skills for these classes. For example, a consensus definition for having learned how to read could be a grade equivalent of 4.5 or 5.5 on a standardized achievement test for reading. Students who fail a proficiency test and are below the consensus definition of reading acquisition would be eligible for a remedial class in learning

how to read. Those whose reading grade equivalents were above this level would go into regular English classes. (See Riverside study in this report for details on consensus definition).

Writing also divides into overlapping acquisition and application components. Consensus definitions of when students have learned how to write and how to compute should be adopted. Knowing how to write involves use of grammar, punctuation, and spelling, and communicating everyday messages. Going beyond this level involves application of writing ability in the form of essays and creative writing, which are usually taught in regular English classes.

Computation ability has a clearer demarcation line. The basic arithmetic operations are well known, readily sampled, and differentiated from applications to problem solving. However, students are expected to use their arithmetic ability to solve simple problems. Again, a consensus definition has to be used to determine when students have learned arithmetic operations and their application to problem solving.

The reason the law does not have to be changed to accommodate a guideline on which students should take remedial classes is that the law does not require remedial classes for students who fail a proficiency test, but only that the school district provide such classes for students who want to take them. Conferences with parents and students could be used to decide which students need to take the course and which students might better go into regular English or mathematics classes. Adoption of these guidelines would enable school districts to be more economical and equitable in assessing proficiency.

If school districts incorporated proficiency standards in regular classes as San Diego does, then they would effect greater economy and improve the quality of education in these classes. They would also

eliminate the current anomaly of students who pass course-based requirements but fail to get a diploma because they have not passed one or more proficiency tests.

Conclusion

Competency assessment appears to be moving in the direction of its integration into the school district's regular standardized testing program. Some school districts from the very beginning of competency assessment had their standardized tests do such double duty. The Los Angeles Unified School District recently turned in this direction. Riverside is beginning to use standardized tests for its initial proficiency assessment. We think that other school districts will also stop giving their own proficiency tests, particularly if they do not have to assess "life experience" tasks. If they go even further and adopt the San Diego plan, they will eliminate the single test as a criterion of proficiency in a basic skill and reduce the number of remedial classes. Thus, they can achieve economy, equity, and improved quality in all courses required for graduation.

Historical Background

The advent of proficiency assessment is the result of a social, economic, and political shift in the attitudes of the country that focussed on "holding teachers and students accountable" (Singer, Ruddell, McNeil, and Wittrock, 1983)*. The country had just gone through the 1960s Civil Rights Revolution. Although the 1954 Supreme Court decision found that separate but equal school facilities were inherently unequal, it was not until the 1960s that the concept of equality of educational opportunity shifted from equal input to equal output in evaluating schools (Coleman, 1968) and courts began to use bussing to desegregate schools. During this time, federal funds to education had increased dramatically, often tied to innovative projects. Also, student demands for making education relevant led to a multitude of new courses.

In the 1970s, a reaction occurred to the 100 percent promotion policy, known as social promotion, initiated in the 1950s (Caswell and Foshay, 1950). Studies done in the 1940s and earlier had shown that elementary students who were not promoted did not achieve as well as comparable students who were advanced to the next grade with their social group (Caswell and Foshay, 1950). In the interests of achievement, as well as social adjustment, schools decreased their retention rates. This decrease also coincided with an influx of students in the schools, the post-World War II baby boom, which formed a demographic bulge that progressed through the schools and led to unprecedented expansion at each school level, elementary to high school in the 1950s and universities in the 1960s. Contraction of the school systems at these levels and termination of a teacher shortage became a phenomenon in the 1970s and early 1980s. Enrollment contraction in the early 1980s did make space available in

schools for retention to again become feasible. However, schools did not return to a pre-bulge retention policy because retention is costly: it increases the time from six months to one year more that retained students are in school.

Under urging from Civil Rights leaders, minority students remained in school longer. In the 1950s only 55% of the students had remained to graduate; in the 1970s, the figure had climbed to some 85%. Minority parents were concerned lest schools pass students through without standards; majority parents were concerned lest the standards drop. Reports that scores on scholastic aptitude tests had dropped also eroded public confidence in schools, even though the drop could be attributed to a variety of factors (Wirtz, 1978). Tax-payers who were already suffering from the effects of inflation in the country's economy and had to pay for the increased high school enrollment wanted evidence that the schools were accountable for achievement, particularly for development of basic skills. Acting in concert, these groups persuaded legislators to adopt minimal competency or proficiency laws in basic skills. These laws led to competency tests that assess student's development of basic skills, for use in academic courses and their applications to social competence, known as life-skills or functional abilities.

One effect of the proficiency law is that it introduced another tier of students into the high school. Those students who do not pass the minimal competency test(s) now comprise one tier of students. Another tier consists of those students who take and obtain scores on college placement tests high enough to make them admissible to four year colleges and universities. In between these two tiers of students are a third group. In California, the two lower tiers may go on to two-year community colleges if they want to continue in public education.

Because a large proportion of Blacks and Hispanics fail competency tests, the effect of the proficiency law is that it tended to resegregate students in the high school.

Political, Legal, and Social Issues in Competency Assessment

The advent of proficiency assessment led to considerable debate about its legality. A due process issue was raised early over the instructional validity of the tests, that is, whether the objectives of the tests were embedded in the curriculum and experiences were provided in class for achieving these objectives (McClung, 1979).

A Florida court found that schools had the right to use competency tests, but delayed their onset to give students more adequate notice (Debra P. v Turlington, 1979). Although the Florida case seemed to settle the legality of schools imposing competency testing, the debate has continued, but it has focussed on political and social issues. For example, Goldman (1984) explained that competency assessment led to a further shift toward central control of education in those states that had adopted a statewide competency testing program. Ericson (1984) pointed out that during the Civil Rights Revolution of the 1960s, the schools attempted to integrate previously excluded minority students but competency assessment in the 1970s was again excluding these students:

> At a crucial time in American history, the schools responded to those excluding them from the regular curriculum, nor by setting up a rigid separation of academic tracks, but by attempting to integrate the previously excluded into the mainstream of the schools, and thus American life... If the movement toward maxima [attainment] places

those gains in jeopardy, we may once again have the valuable diploma and strengthened technological and scientific elite, yet at what costs to our social, political, and moral ideals?

However, the intent of competency testing, at least in California, was not to exclude, but to attain an ideal, as stated by Senator Gary Hart (1981, p. 4), author of California's competency law: "Public confidence can be restored if schools demand excellence in all areas of the curriculum and assist every student to advance as far as he can go. ...I believe that the proficiency law provides a framework to enhance and improve instruction for California students."

But, throughout the State competency assessment has led to resegregation of students. Black and Hispanic students predominate in remedial proficiency classes. In some school districts, such as Oakland, students may occupy remedial proficiency classes throughout their entire high school years. In Los Angeles, the remedial proficiency students who persistently fail their proficiency tests may complete an entire high school "remedial" curriculum that parallels the regular curriculum with individual names and numbers for each course. These courses all count towards high school graduation.

However, resegregation because of competency assessment can be avoided. As we shall see in our final section, San Diego places all students into its regular classes and assesses their proficiency as part of each class. Thus, its minimal and maximal standards occur within its regular classes.

National Variation in Proficiency Assessment

Some 38 states have minimal competency or proficiency assessment. It varies from state to state in governmental level for setting of standards

(7 local, 19 state, and 12 state and local); grade levels in which assessment occurs (grade 1 to 12); expected use of standards (grade promotions, 3; high school graduation, 16; and local option, 2); early exit (only 2, California and Florida); remediation (11, including California); and first graduation class assessed (1980 to 1875) (Education Commission of the States, 1980).

To make these figures more meaningful, we will describe New York's proficiency program. New York adopted one test, a reading test, Depth of Reading Power, and set the passing score for it. New York assesses students in grades 3, 6, and 8-12 and uses the results for determining who needs remediation and for high school graduation. However, New York also allows students to take their school district's standardized test; if they receive the 50th percentile ranking or higher on a test standardized for the 7th, 8th, or 9th grade, they have passed the proficiency test and do not have to take the State's test. Thus, New York has an alternative to the State's proficiency test.

In contrast to New York's central control over proficiency assessment and uniform standard for passing its test, California opted for local control, tests, and standards. Consequently, parents in New York perceive that the governor and state legislators are the people who determine whether their children will receive a diploma upon completion of the 12th grade. In California, parents know that it is the superintendent and the local school board plus the community representatives who make decisions on tests and standards and have to bear the brunt of any negative parental reaction.

California's Proficiency Law

The law governing proficiency assessment at the high school level was passed in 1976 (Hart, AB 3408, 1976). The next year competency assessment at the elementary school was authorized (McAlister, AB 376, 1977). Further legislation required governing boards of elementary school to articulate their minimal competency standards with high schools' minimal competency standards (Greene, AB 65, 1977).

These bills and accompanying statutes ordered school districts to construct their own competency tests or else adopt a test and determine the score necessary for passing it by June, 1979. Each district had to assess pupil progress towards mastery of basic skills at least once during the fourth through sixth grades. This assessment is known as the "early warning test." Districts also had to assess once during grades 7 to 9 and again in grades 10 and 11. This assessment is called the proficiency or "exit level test," the test that must be passed to acquire eligibility for a high school diploma. But whenever a student has demonstrated mastery of basic skills, the school does not have to reassess the student again. The new law in the Education Code directed the State Board of Education to provide a framework, including samples of basic skills standards for assessing student proficiency, but specifically forbade the State Department from constructing such a test (Education Code 51217). Thus, the legislature wanted only local control over the assessment. The standards for ascertaining and evaluating individual achievement in basic skill areas were to include but were not limited to reading comprehension, writing, and computation in English necessary to success in school and life experiences. The Boards were to adopt these standards with the active involvement of parents who are broadly reflective of the socioeconomic composition of the district and the district's professional staff, including administrators,

teachers, and counselors.

The school district has to hold conference with parents for any students who upon exit from grades 6 and 8 do not appear to be making satisfactory progress towards mastery of basic skills. At these conferences, the principal or principal's representative is to outline the instructional program for assessing the student in mastery of basic skills (Education Code 51216).

Starting on June 1, 1980 no student can receive a high school diploma without having passed the school district's minimal competency test (Education Code 51217) and completing the school district's course of study, which has to include English, American history and government, mathematics, science, physical education (unless exempted), and other courses as may be prescribed.

However, the minimal competency law stipulated that school districts were to adopt differential standards for students with diagnosed learning disabilities. The Education Code already permits alternate means for these students to complete the prescribed courses of study including practical demonstration of skills and competencies, work experience, interdisciplinary study, independent study, and credit courses at postsecondary institutions.

A copy of the proficiency law as stated in the Education Code is in Table 2.

Table 2. California's Educational Code on Proficiency Assessment

A. Chapter 2, Article 5, from West's Annotated California Codes: Education Code, (Reorganized), Sections 51215-51217.

Article 2.5

STUDENT PROGRESS, ELEMENTARY AND SECONDARY SCHOOLS

Sec.
51215. Adoption of standards of proficiency in basic skills.
51216. Assessment of pupil proficiency.
51217. Withholding of diploma of graduation.

Article 2.5 was added by Stats.1977, c. 894, § 43, eff. Sept. 17, 1977.

§ 51215. Adoption of standards of proficiency in basic skills

The governing board of each school district maintaining a junior or senior high school shall, by June 1, 1978, adopt standards of proficiency in basic skills for pupils attending school within its school district.

The governing board of each school district maintaining grades 6 or 8, or the equivalent, shall, by June 1, 1979, adopt standards of proficiency in basic skills for pupils attending such grades.

Such standards shall include, but need not be limited to, reading comprehension, writing, and computation skills, in the English language, necessary to success in school and life experiences, and shall be such as will enable individual achievement to be ascertained and evaluated. Differential standards and assessment procedures may be adopted for pupils with diagnosed learning disabilities.

Governing boards maintaining elementary or junior high schools located within a school district maintaining a high school shall adopt standards of proficiency in basic skills which are articulated with those standards adopted by the school district maintaining the high school.

Designated employees of all school districts located within a high school district and one or more designees of the high school district shall meet prior to June 1, 1979, to plan for articulation of elementary and high school proficiency standards, and as necessary thereafter to review the effectiveness of such articulation procedures.

Standards of proficiency shall be adopted by the governing board with the active involvement of parents broadly reflective of the socioeconomic composition of the district, administrators, teachers, counselors, and, with respect to standards in secondary schools, pupils.

(Added by Stats.1977, c. 894, § 43, eff. Sept. 17, 1977.)

Historical Note

Section 42 of Stats.1977, c. 894, provides:

"It is the intent of the Legislature that pupils attending public schools in California acquire the knowledge, skills and confidence required to function effectively in contemporary society.

Table 2 (Cont.)

"The Legislature finds that high school graduation requirements are generally related to "seat time" and tied to college entrance requirements.

"The Legislature further finds that some pupils currently graduating from the public schools lack competence in essential communication and computation skills, and the confidence that they can cope successfully with a complex society.

"It is the intent and purpose of the Legislature to ensure the development of clearly defined proficiency standards in basic communication and computation skills for pupils attending public schools. It is the purpose of Section 43 of this act to ensure early identification of pupils lacking competence in basic skills, so that such pupils can receive appropriate assistance to achieve mastery of such skills prior to high school graduation.

"It is the purpose of Section 43.5 of this act to provide students with opportunities to utilize community education resources and to develop and demonstrate their abilities in a variety of educational settings."

Cross References

School improvement plans, see § 52015.

§ 51216. Assessment of pupil proficiency

Beginning in the 1978–79 school year, the governing board of each district maintaining a junior or senior high school, and beginning in the 1979–80 school year, the governing board of each district maintaining an elementary school, shall take appropriate steps to ensure that individual pupil progress towards proficiency in basic skills is assessed in the English language during the regular instructional program at least once during the 4th through 6th grade experience, once during the 7th through 9th grade experience and twice during the 10th through 11th grade experience, provided that any pupil who demonstrates proficiency up to prescribed levels for graduation from high school need not be reassessed. Nothing in this section shall preclude any district from conducting an assessment of any pupil in English and in the native language of such pupil.

It is the intent of the Legislature that pupil assessments measure the progress of each pupil in mastering basic skills rather than the pupil's performance relative to his or her classmates.

In the case of any pupil who does not demonstrate sufficient progress toward mastery of basic skills so that he or she will be able to meet prescribed standards upon exit from the 6th, 8th, or 12th grade, whichever is appropriate, the principal shall arrange a conference among the principal or the principal's designee, the parent or guardian of the pupil, and a teacher familiar with the pupil's progress to discuss the results of the individual pupil assessment and recommended actions to further the pupil's progress.

The secondary school pupil shall attend the conference. The elementary school pupil shall attend the conference unless the principal's designee and the parent or guardian agree that such presence would not be in the pupil's best interest.

The pupil and the parent or guardian shall be requested in writing to attend the conference. Such notice shall be written in the primary language of the parent or guardian, whenever practicable.

Table 2 (Cont.)

Absent a response from the parent or guardian the school shall make a reasonable effort to contact him or her by other means to communicate directly the information contained in the written request.

At the conference, the principal or the principal's designee shall describe the instructional program which shall be provided to assist the pupil to master basic skills. If the parent or guardian does not attend the conference the principal or the principal's designee shall communicate such information by other means within 10 days of the date of the conference.

Instruction in basic skills shall be provided for any pupil who does not demonstrate sufficient progress toward mastery of basic skills and shall continue until the pupil has been given numerous opportunities to achieve mastery.

(Added by Stats.1977, c. 894, § 43, eff. Sept. 17, 1977.)

Cross References

School improvement plans, see § 52015.

§ 51217. Withholding of diploma of graduation

Subsequent to June 1980, no pupil shall receive a diploma of graduation from high school if he or she has not met the standards of proficiency in basic skills prescribed by the secondary school district governing board.

The State Board of Education shall, by February 1, 1978, prepare and distribute to each school district maintaining a junior or senior high school, and by October 1, 1978, prepare and distribute to each district maintaining an elementary school, a framework for assessing pupil proficiency in reading comprehension, writing, and computation skills. Such framework shall include a range of assessment items in each skill area. The assessment framework shall be provided solely to assist each school district in the development of its own pupil assessments as required by Section 51216.

Nothing in this section shall be construed to authorize or permit the State Board of Education to adopt statewide minimum proficiency standards for high school graduation.

(Added by Stats.1977, c. 894, § 43, eff. Sept. 17, 1977.)

Proficiency Assessment

Most school districts constructed their own proficiency tests (State Report, 1980). The purpose of constructing their own tests was to meet legal requirements for curricular and instructional validity. Also, with repeated testing, it was economical to construct rather than purchase tests. The Los Angeles Unified School District estimates it spent up to three million dollars to develop its own test and create miniunits for instruction in basic skills. The district then contracted with McGraw-Hill Book Company to publish the test and miniunits. The reading test is known as the Senior High Assessment of Reading Proficiency (SHARP). Some school districts adopted a commercially-published competency test, such as the Educational Test Service's (ETS), Basic Skills Assessment.

These tests, shown in Table 3, are criterion-referenced. That is, students must meet a criterion level to pass each test. According to ETS's description of its test, it is "relatively easy for the population as a whole." Using the Flesch Reading Ease formula to determine the reading difficulty of a sample passage in ETS's description of its test, we found that it has a readability of grade 8 to 9, which means the passage is about as difficult to read as a passage in Reader's Digest or Time magazine. About the closest we would come to a 100 word passage on the SHARP test was (1) a notice for a rent increase which was "fairly difficult" to read, is equivalent to reading material at grades 10-12 and is comparable to reading material in Harper's and Atlantic magazines and (2) a driver's license manual which contained reading material that was "fairly easy," is equivalent to reading materials at grade 7, which

Table 3. Two Commercially Published Proficiency Tests

A. Senior High Assessment of Reading Proficiency (SHARP). Monterey California: CTB (McGraw-Hill, 1975). Copyright© 1975 by Los Angeles Unified School District.

Purpose: Objectively assess reading skills for forms and documents adults read and/or complete continuously. Total number ofitems: 120. Passing score: 81 (67 percent of the total).

Categories:

1. Can you follow directions for voting, driver's tests, library cards, job and rental applications, unemployment insurance claims, letter writing, social security documents, and change of address forms. Example: Rent receipt followed by questions with multiple choice answers.

2. What's In It? Reading and comprehension of signs, labels, and want ads, Yellow Pages, dictionaries, newspapers, warranties, bank accounts, signature cards, credit applications, and check writing. Example: Driver's License Test Signals: Section represented from state's vehicle code followed by questions and multiple choice answers.

3. What Does It Mean? Reading skills involved in the use of maps, area codes, cash register tapes, bank statements, TV guides, income tax forms, utility bill codes, and job resumes. Example: Memo on rent increase and electricity payment policy change followed by questions with multiple choice answers.

B. Basic Skills Assessment. (A cooperative effort by Educational Testing Service and a national consortium of school districts, 1977).

Description: Three multiple choice tests, each takes approximately 45 minutes. The Writing Sample, a direct measure of writing ability, is read and scored by trained staff with backgrounds in English.

Purpose: Identify between group requiring remediation in basic and group not requiring such remediation. Test reliabilities are over .90. Assess school skills and life skills.

1. Reading (Total items: 65)

Table 3 (Cont.)

Skills and items: Literal Comprehension (33), Inference (25), Evaluation (7).

Content: Consumer (12 items): telephone directory, loan agreement, guarantee, advertising, operating guides, product information.

Learner (14 items): Newspaper or magazine, narrative, dictionary, school catalog, cartoon, book or periodical titles.

Citizen (14 items): Editorial, tax form, driver's application form, law, political propaganda, community resources.

Protector (12 items): Medicine label directions, product warnings, nutritional information, first aid information, road map.

Producer (12 items): job application, description of benefits, bus schedule, want ads, work-related information.

2. A Writer's Skills (Total items: 75)

Skills and items: Mechanics of writing (spelling of common words, 14; capitalization and punctuation, 14); effectiveness of expression (appropriate English usage, 16; such as, subject verb agreement, verb form, tense, etc.); Evaluation and organization (27 items such as clarification of ambiguities, relevancy, sentence relationships, economy, logical sequence of information, diction according to tone).

Content

Consumer: Letter explaining a problem, personal check.

Learner: Informative passage, narrative selections, descriptive passage.

Citizen: Announcements and messages, letter expressing point of view, properly addressed envelope.

Protector: Letter requesting information, announcements and messages, instruction.

Producer: Want ads; letter of application for employment, employment form, business correspondence.

Table 3 (Cont.)

3. Mathematics (Total items: 70)

   Skills: Addition, subtraction, multiplication, division of whole numbers, and fractions; finding percent, compute average, estimate and compute measurement, read graphs, compute interest, compute elapsed time.

   Content: Computation (30 items), Applications (40 items) Consumer buying, taxes, banking, wages and salaries, household expenses, shipping and mailing, transportation, statistical inference, health and nutrition, sports.

4. The Writing Sample. (3 types of writing; suggested time: 45 minutes). Specifications for writing exercises:

   1. Write a letter applying for a job in response to a want ad.

   2. Fill out a simple form, such as an application for a driver's licence.

   3. Choose one:

      a. Creative writing: Write imaginately about a written or visual stimulus.

      b. Informative writing: Accurately convey given information, such as relaying a telephone message or describing a process.

   Scoring:

   1. Analytical scoring (points) of some exercises by teachers aides

   2. Holistic scoring (judgment or total impression; ignore minor grammatical errors) of some exercise by English teachers

according to the Flesch readability norms indicates the reading material is about as difficult to read as a slick magazine such as True Stories.

On the math section of the ETS test, the item with the highest level of difficulty is computation of percent, which schools typically teach in 7th grade math classes.

The items in the writing part of the test are difficult to judge. But they do not appear to be higher than the content taught in grades 7 to 9. Thus, these two tests are at a difficulty level appropriate for an average student in grades 8 to 9.

In California, each school district determines the difficulty level and what the passing score on its competency tests will be. The percent who do not pass at the end of grade 12 varies from district to district. Therefore, to know what passing a competency test means, it is necessary to examine the school district's test and know the score used for passing it.

Although the State Department of Education must collect annual data on proficiency assessment, the number of school districts that comply with a report to the State Department has decreased each year. In 1980, school districts representing some 80,000 students expected that 7 per cent, some 21,000 would not receive a diploma in 1981 because they had not passed one or more proficiency tests (State Report, 1980). The figure is likely to vary considerably from district to district. For example, Riverside reported that less than 1 per cent of its students did not receive a diploma at commencement time because they had not yet passed one or more proficiency tests (Ferrett, 1987). These students can still take the test after the 12th grade and can still be admitted to a community college without the diploma.

Initial Consequences of Proficiency Assessment

The California State Department of Education's 1980 status report to the Legislature on implementation of California's Pupil Proficiency Law was based on a sample of school districts that contain over 80,000 students. The report found that (1) 78 percent of school districts constructed their own proficiency tests, (2) 47 percent assessed both "school skills" and "life skills", 39 percent emphasized "school skills," and 15 percent stressed "life skills," (3) 90 percent of the school districts indicated greater emphasis on instruction in basic skills, (4) few districts reported inservice training of teachers for instruction in basic skills, (5) less than half the parents of failing students attended conferences the law requires schools to hold, (6) 90 percent of the school districts indicated greater emphasis on instruction in basic skills, (4) few districts reported inservice training of teachers for instruction in basic skills, (6) less than half the parents of failing students attend conferences the law requires schools to hold, (7) only 58 percent of the school districts had adopted a differential standard for students in special education programs, (8) an estimated 7 to 8 percent of twelfth graders, about 21,000 students, were expected to fail the proficiency tests and not receive diplomas at graduation in 1981, which will put a strain on superintendents and school boards to lower the requirements for passing or else make the tests easier, (9) the drop-out percentage may increase as a result of an interaction between the school's course requirements and failure to pass the proficiency test, and (10) 30 to 50 percent of the sophomores (100,000 to 150,000 students) were failing one or more sections of proficiency tests and were enrolling in one or more remdial classes, which is endangering and perhaps trivializing the high school curriculum as math and English

teachers have to teach more remedial courses and hence have to reduce availability of advanced courses. The last item indicates that a large amount of school resources has been shifted from the top 70 to the lower 30 percent of students to comply with the remedial course requirements. Reallocation of resources reduced the number of advanced courses schools could offer. This shift in school resources represents a drastic change in the quality of the high school's program. Although offering more remedial courses may help students at the lower end of the achievement distribution pass their proficiency tests, it is likely to be counterproductive to achievement in basic skills for the upper 70 percent of the students. Their improvement depends on development in advanced courses in the various content areas of the curriculum. As teachers have to administer proficiency tests, participate in planning conferences for students who fail the tests, and offer more remedial courses in English and math, the offering of advanced and elective courses is likely to decrease with detrimental effects to the quality of school education and preparation of students for college and universities (Singer, 1982).

Conclusions and Implications

Thus, the proficiency law responded to the public's demand that schools be held accountable for development of basic skills. But the public is largely unaware of what the accountability means and what it costs. Districts have not released the grade equivalent standards of their proficiency tests. Nor have they indicated whether they have made any changes in their proficiency tests. Nor do school districts inform their local communities on whether students are performing better or worse on proficiency standards from year to year. Nor do they indicate how much the program costs and how much of their resources were reallocated to

accommodate the new program. In the next section, we will present our research on one of these issues: variability in proficiency assessment.

Without preparation of teachers for teaching remedial courses, the courses were probably not as effective as they would have been had the school districts trained teachers for competency. For example, the teachers of the remedial courses were not likely to differentiate students who were still learning how to read (acquisition phase of reading development) from students who are beyond the acquisition stage and using their reading to gain information (learning from text phase of development) (Singer and Donlan, 1985). In the next section, we shall report a research study on the effectiveness of remedial classes versus regular English classes for students who are beyond the acquisition phase of reading development.

The single-test model and remedial course program that has been in effect in California for the past 7 to 8 years is in the process of being phased out as such. Or, to state it another way, the proficiency assessment program is being absorbed into the school district's regular program. For example, some school districts are no longer giving a separate competency test, but instead they are employing their standardized tests for evaluating student achievement and for determining proficiency in basic skills. Even the Los Angeles Unified School District is no longer administering the proficiency test (SHARP) that it had spent $3,000,000 to develop, but instead is using a subset of its standardized test to assess competency in basic skills. As we have already pointed out, the San Diego Unified School District has completely absorbed the proficiency program into its 23 regular courses required for graduation. A summary and analysis of the San Diego program will be found in the next section.

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Research on Proficiency Assessment

Comparison of New York and California's Solutions to Proficiency Assessment of Basic Skills

Although experts do not agree on a formal definition of literacy (Bormuth, 1975), European society has used a criterion of literacy for several centuries (Resnick and Resnick, 1977). The United States also used this criterion, but over the past 100 years, it has been raised drastically. In 1880 a person was literate if he could read and write his own name (Fisher, 1978). The advent of proficiency assessment, which began in Florida in 1971 and was adopted by 39 states within the next decade (Education Commission of the States, 1980), effectively elevated the standard for literacy to about an eighth to ninth grade level of achievement and required students to demonstrate they had achieved it by passing a test. This new standard involved for the first time not only a formal test but also a qualitative change in the criterion for literacy. Previously literacy consisted only of the ability to read familiar material aloud to an examiner's satisfaction, attendance at school for six years or more, or an affirmative response to an inquiry on whether a person knows how to read or write a simple message. The new criterion requires a demonstrated ability to understand an unfamiliar text and use the information from that text in a new situation (Resnick and Resnick, 1977).

However, each state has adopted its own proficiency assessment procedure. The two largest states, New York and California, represent a contrast between central and local control over assessment procedure. New York adopted a statewide test, know as Depth of Reading Power, but also provided an alternative: any student who passed a local

district adopted standardized reading test at the 50th percentile or above that had been administered in the 7th, 8th, or 9th grades satisfied the state's minimal reading proficiency requirement and therefore did not have to take the state's reading test (The University of the State of New York, 1980). Any student who had failed the state's test had to take a remedial course. California opted entirely for local control over the means of assessment, whether by test or other ways of determining proficiency (McAlister, 1977; Hart, 1976; Greene, 1977). If the local district chose to use a test, it could construct its own, adopt a commercial test, or use a combination of its own construction and purchase of items for its test from a test publisher or an item bank. The district could also determine its own passing score on the test. The only state-determined requirement was that the local school board had to adopt the test using guidelines provided by the State Department of Education (Education Code 51217). Once students had passed the school district's proficiency or "exit level" test, they did not have to take the test again. The "exit level" test that must be administered at least once in grades 7 to 9 and again in grades 10 and 11 contrasts with the minimal competency or "early warning" test that must be administered at least once in grades 4 - 6. California also required school districts to provide remedial courses for students who did not pass the tests, but did not require the students to take them. However, the local districts had to arrange a conference with students who had failed one or more proficiency tests the first time it was administered in grades 7 to 9 to inform their parents and plan a course of action for the students to take so that they could get the necessary instruction for passing the tests (Education Code 51216). In practice, the usual action was to have the students sign up for remedial courses. But the minimal competency law stipulated that school districts were to adopt differential standards for

students with diagnosed learning disabilities.

Thus, the criterion for passing the proficiency test in New York is quite clear. When students receive a diploma in New York, the state knows they have attained at a minimal level of reading proficiency, either on the Depth of Reading Power test or on a standardized reading test, or have passed a remedial reading course. Because California has allowed each school district to adopt or construct its own proficiency test, it is not clear what minimal level of proficiency in basic skills students have attained when they receive a diploma. Therefore, the purpose of this study was to determine what California school districts have done to comply with the state's proficiency requirements and to compare their locally adopted levels of proficiency with the level of proficiency required by New York's standardized test option for proficiency in reading.

Design of the Study

Reading proficiency tests and standardized reading tests from a representative sample of school districts throughout California were statistically analyzed to determine their reliability and their relationship to the district's standardized reading test. Then a comparison was made between the standardized reading grade equivalents of California and New York students as determined by their proficiency test scores.

Each district was asked to provide us with the standardized achievement test and proficiency test results for at least one middle, junior, or high school class from the previous school year. The results were to be for the students at the grade level where the proficiency test used to determine graduation standards was first administered. For this sample of schools, the results were for tests given in the eighth grade. Some districts gave us the results from one school, some gave us results for all schools in the

district.

Using data from the grade level at which the test was first administered gave us results on the largest possible proportion of one age cohort; consequently, these data were also the most variable and provided the highest available estimates of test reliability as well as the clearest separation at the criterion level on the proficiency test. (Testing at any later level would have provided truncated results because the more capable students would have already passed the test and would therefore not be a part of the sample.)

How reliable are the proficiency tests?

Reliability was estimated using the Kuder-Richardson Formula 21 which is calculated from one administration of one form of a test and is based upon two fundamental assumptions: that items in one form of a test have as much in common as do the items from parallel forms of the same test, and that items are essentially of equal difficulty. KR_{21} is a measure of the homogeneity of the test items--the extent to which each item measures the same thing--in this case, reading comprehension. Because the error term is limited to variations in the testing situation and variation in the items used, and does not include error associated with the temporal stability of responses, it provides a higher estimate of reliability than that secured using the parallel forms method; however, when item difficulties vary markedly in difficulty, the estimated reliability coefficient is reduced.[1]

Table 1

Mean, Standard Deviation, and KR_{21} Reliability of District Developed Proficiency Tests and of Nationally Standardized Tests, Calculated on Same Group of Pupils

District	Proficiency Test			Standardized Test		
	Mn	sd	KR_{21}	MN	sd	KR_{21}
A	26.8	4.492	.70	45.9	15.416	.92
B	43.3	6.210	.86	62.5	16.699	.94
C	43.3	8.483	.58	41.3	14.293	.89
D	72.5	16.095	.93	42.0	12.624	.91
E	54.6	9.525	.90	33.5	7.957	.84
F	44.7	13.54	.93	56.4	27.928	.96
G	33.6	7.431	.87	53.2	19.153	.95

Great variability in estimated reliability was found among the seven proficiency tests examined, as shown in Table 1. The lowest reliability for a district developed reading proficiency test was 0.58, the highest was 0.93, and the median reliability was 0.87.

The reliability of a test is important because it determines the accuracy of decisions made from the test. For example, the proficiency test used in District C has an estimated reliability of 0.58^2 and the mean is 43.3, very close to the criterion score of 44. The reliability coefficient tells us that 58 percent of the variance of the test scores is non-error (Cronbach, 1970) or true score variance, while 42 percent is due to error--item selection error and test situation error.

In this situation where approximately one-half of the students were above the criterion and one-half were below, a reliability index of 0.58

would result in approximately 22 percent wrong decisions (Ebel, 1965). That is, 11 percent of those students given credit for passing the test actually failed according to their true score, and 11 percent of those students who were told they had failed the test actually passed according to their true score. On the other hand, the same decision using the most reliable proficiency exam (0.93) would result in only seven percent error.

Our second questions asks: How comparable are the proficiency test standards across the state?

To answer this question we carried out a regression analysis on the set of proficiency and reading scores for each school and derived a formula for predicting proficiency test score from the standardized test. Using that formula we then calculated the standardized reading score a student would need in order to score at the criterion level on the proficiency test.

Substantial variation was found in the reading level corresponding to the proficiency test criterion. Table 2 illustrates this variability.

Table 2

Correlation Between Standardized Test (x) and Proficiency Test (y) Scores, the Proficiency Score Required to Pass, and the Grade Equivalent Score Comparable to the Proficiency Score

School	Correlation r_{xy}	Proficiency Score Required to Pass	Grade Equivalent Score
A	0.699	25	8.7
B	0.720	35	5.1
C	0.644	44	8.6
D	0.764	70	7.9
E	0.596	47	7.0
F	0.810	44	8.3
G	0.639	28	5.5

The lowest total reading score required to pass the district developed proficiency test was a grade equivalent score of 5.1 (fifth grade, first month), and the highest total reading score requirement was 8.7 (eighth grade, seventh month). Among these seven districts we found a range of standards for total reading score of three years and six months.

The correlations reported in Table 2 between scores on the district developed proficiency tests and on the nationally standardized reading tests demonstrates that both tests are measuring a substantial common factor. There is 36 percent common variance between the two tests in District E, and 66 percent common variance for the tests used by District F.

Discussion

Within our sample of districts, we found substantial variability in the

reliability of the proficiency tests used to determine eligibility for high school graduation. In those districts with a sophisticated Office of Research and Evaluation or that had secured competent outside help, proficiency tests were highly reliable, sometimes approaching the reliability of the standardized test used in the district.

On the other hand, in those districts where such help was not available, the proficiency tests were very unreliable, which means that many wrong decisions were made from them. Approximately one-half of these wrong decisions were in telling some students that the test had been failed, when with a more reliable test they would have passed. Although they will have additional opportunities to take the test in following years, the first failure starts the student on a remedial track, and each remedial reading course taken reduces the number of genuine English courses the student will be exposed to.

Approximately one-half of the wrong decisions involved telling some students they had passed the test, when with a more reliable test they would have failed. Errors of this type may be the more serious for they tend to deny remedial help to the student who may truly need it.

It was also found that the reading level required for passing the reading proficiency test, as measured by nationally standardized tests, varied substantially among districts. This was not an artifact of which standardized test the district used. In fact, the lowest score and the highest score were found in districts using the same form of the same level of the same achievement test series. It should be noted that the district with the <u>least</u> reliable proficiency test had set the highest standards for passing.

In each of these districts the nationally standardized achievement test was administered in April. The national median score required in New York

to pass the test is a grade equivalent score of approximately 8.7 where the test is administered to eighth grade students. Table 2 shows that only two of the seven districts on which this report is based require reading proficiency as high as that.

If proficiency testing does have a positive impact on instructional programs, it would seem logical to assume that New York's higher state-wide standard will influence such basic skills programs much more than will the local option standards in California where districts are free to set any standard they choose, and where they are set quite low at times. The higher the standard, the more students who will have to take remedial courses, and such standard applied nationally would result in approximately one-half of all students taking remedial reading courses, which is a very great impact on instructional programs.

On the other hand, low standards for passage of the reading proficiency test keeps students from having to take remedial reading programs, making more substantive courses in English available to them where growth in reading may be even grater than it is in remedial reading courses.

Finally, there was substantial overlap between the scores on the standardized reading test and the scores on reading proficiency tests. This was true regardless of the test series used or the district involved. The predictive validity coefficients were in the range one would consider to be quite good. Obviously, perfect prediction is not possible with imperfect tests.

However, the proficiency test results in the districts represented in our sample tend to be less reliable than are the standardized reading test results when the reliabilities are calculated in the same way on the same sets of students. Sometimes the difference in reliabilities is great. Further, the proficiency test results cannot be related to any meaningful

standard that can be interpreted by others. Does the passing score on the proficiency test represent an adequate level of achievement? Few people in any district know the answer.

On the other hand, standardized test results can be interpreted in terms of the national norms. At what level should students read in order to graduate from high school? Would the districts whose present standards are set at fifth grade level retain those standards if the public knew that was the minimal expected level of achievement for graduation?

This study contrasted the proficiency test policies of the two largest states, New York and California. New York has opted for use of standardized tests, either centrally or locally adopted with central determination of the score required for passing the test. California allows complete local control over all aspects of proficiency assessment. The contrast is that New York has a relatively uniform standard for the entire state, whereas California has great variability among its local districts in the reliabilities of their proficiency tests and in the standards required for passage. This variability raises issues of equity and fairness within the state and does not provide certainty to its citizens about the reading competency required for a high school diploma.

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Footnotes

[1]The use of KR_{21} would provide a more accurate estimate of the reliability of the tests; however, this formula requires knowledge of the right and wrong responses on each item for each student and those data were not possible to secure for either the district proficiency test or for the nationally standardized test.

[2]In this particular situation the low reliability of the proficiency test is not the result of using classical test theory to establish the reliability of a criterion referenced test. The proficiency test in question is actually a poorly constructed reading comprehension test. It does not have the restricted variance associated with criterion referenced tests, and, in fact, its variance is greater than the variance of three of the other proficiency tests we analyzed, each of which had substantially higher reliability.

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Improving Student Performance for Passing a Minimal Competency Test in Reading: Are remedial English classes more effective than regular English classes?

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Although some 38 states now have minimal competency testing, the characteristics of the programs vary considerably from state to state. When they went into effect, they differed in governmental level for setting of standards (7 local, 19 state, and 12 state and local); grade levels assessed (grades 1 to 12); expected use of standards (grade promotion, 3; high school graduation, 16, and local option, 2), early exit tests (only 2, California and New York); remediation (only 11); and year the first graduating class was assessed (1980 to 1985) (Education Commission of the States, 1980). We expect we would also find variation in the kind of remediation offered. But we doubt whether students who fail a minimal competency test are separated into those students who are still learning how to read from those students who are using reading to learn from text and given appropriate instruction that will enable them to pass the test. The reason for this lack of differentiation is that we do not have a diagnostic test for separating the two groups.

The purpose of this study was (1) establish a procedure for separating students in the acquisition phase from those students in the learning from text phase of reading development and then (2) determine whether placement

in a remedial English class versus placement in a regular English class is more effective for enabling students who are beyond the acquisition phase of reading development to pass the school district's minimal competency test in reading.

Differentiating Reading Development

Reading development can be viewed as having three levels, as shown in Figure 1. At the first level, reading development is assessed by a

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Level 1	Reading Development				
Level 2	Reading Acquisition		Learning from Text		
Level 3	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5

Figure 1. Three levels of reading development.

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standardized reading achievement test and is perceived as continuous.

At the second level, reading development consists of two overlapping phases: learning how to read and use of reading to learn from texts. Learning how to read involves (a) learning to decipher or identify printed words, (b) use of language background of semantics, syntax, and phonology in the process of reading, and (c) integration of (a) and (b). Learning from text goes beyond reading acquisition to also draw upon an individual's general knowledge, cognitive and metacognitive processes, and general vocabulary ability. Unlike deciphering, which consists of a finite number of rules to be learned, learning from text components continue to develop in an individual throughout his or her lifetime.

At the third level are five stages of reading development that Chall (1983) has defined and argues are discontinuous, that is, they do not overlap. The first two are acquisition of decoding and development of fluency or automaticity in decoding. They are subsumed in the reading acquisition phase of reading development. The next three stages are learning the new, learning multiple points of view, and construction and reconstruction of meaning. They can be categorized under the learning from text phase of reading development.

Thus, as we go down the chart from Levels 1 to 3, reading achievement shifts from continuity to two overlapping phases, and finally to five discontinuous stages of development. Assessment at the first level informs us of a student's reading grade status; as we proceed down in level, we attain diagnostic information.

Tests that provide a differential diagnosis have already been developed (Chall, 1987). For the second level, we devised a consensus procedure that allowed us to differentiate reading acquisition from ability to learn from text.

Consensus Procedure for Differentiation of Reading Acquisition from Ability to Learn from Text

The procedure we used for differentiating reading acquisition from ability to learn from text was based upon a paragraph and its accompanying questions taken from the Stanford Reading Achievement Test, shown in Table 1.

Table 1. Stanford Reading Achievement Paragraph for Consensus Definition of Student Beyond Reading Acquisition Phase of Development (reprinted with permission of Psychological Corp.).

According to legend, Minerva was a beautiful Greek goddess who caught and then tamed the great flying horse, Pegasus. Since Minerva didn't really want a horse for herself, she wondered what to do with him. Because of his wings, Minerva knew that Pegasus was not an ordinary horse. She believed that he was not meant to be ridden by any mortal man, and, therefore, gave him to the nymphs to bring up. They gave Pegasus the best of care, and saw that he was well fed and that his coat was kept shiny, his mane long and flowing, and his wings brushed. They even rode him on special days. However, unlike Minerva, they thought that some day he would belong to a wonderful man, and they wanted to keep him ready. That is just what happened, for a charming and good prince by the name of Bellerophon saw Pegasus and rode away on him.

36 Pegasus was not an ordinary horse because he had —
5 magic power
6 wings
7 golden reins
8 a man's head — 36 ⑤ ⑥ ⑦ ⑧

37 Who caught Pegasus first?
1 Minerva
2 the nymphs
3 Bellerophon
4 a prince — 37 ① ② ③ ④

38 At first Pegasus was a —
5 wild horse
6 prince
7 goddess
8 frog — 38 ⑤ ⑥ ⑦ ⑧

39 According to legend, Pegasus' mane was kept —
1 long and flowing
2 shiny
3 curled
4 trimmed — 39 ① ② ③ ④

40 The nymphs might be said to have acted without Minerva's —
5 courage
6 approval
7 faith
8 charity — 40 ⑤ ⑥ ⑦ ⑧

41 According to this story, the first real person to own Pegasus was —
1 Minerva
2 Bellerophon
3 the nymphs
4 a goddess — 41 ① ② ③ ④

42 It appears from this paragraph that legends are —
5 mostly fiction
6 no longer told
7 always about goddesses
8 part real and part fiction — 42 ⑤ ⑥ ⑦ ⑧

We asked four high school principals to read this paragraph and answer its questions. Note that the content in the paragraph is outside of a student's daily experience. The principals agreed that if a student could read this paragraph and answer its questions, the student knew how to read. Only then did we reveal that a score achieved on this test by answering all the questions up to and including the first two questions on this paragraph would give a student a grade equivalent score of 5.5. Thus, we established by consensus that students who were beyond grade equivalent 5.5 on a standardized test were in the learning from text phase of reading development. We are not claiming that this criterion should be universally accepted; indeed, we probably could also have gotten consensus on a grade equivalent of 4.5 because the paragraph at this level is also beyond a student's direct experience; it is about uses of iron ore in Africa. We wanted to be conservative in our consensus definition and so we used the reading grade of 5.5 as our dividing line between the two phases of reading development. The high school principals then agreed to participate in our experiment.

Experiment

The experiment was designed to test the effectiveness of a remedial English class for students who were beyond reading acquisition but had failed the district's reading competency test compared with placement of a comparable group of students in a regular English class. We evaluated the relative effectiveness of the two types of classes by determining whether a significant difference occurred in the number of students from each type of class who passed the school district's reading proficiency test the next time it was administered. The test, constructed by the school district under guidelines issued by California's State Department of Education,

consists of a combination of life-skill and academic tasks. It has a reliability of .89. The standard for passing the test when compared with a nationally normed, standardized test, the Comprehensive Tests of Basic Skills, is equivalent to grade 8.8.

Rationale and Related Research

The schema interactive theory of reading postulates that reader resources beyond the reading acquisition level consist of metacognition, cognition, semantics, and general knowledge (Adams and Collins, 1985). Consequently, a curriculum that emphasizes further development of these resources is more likely to improve a reader's performance than a curriculum that does not stress them.

Comparison of the regular and remedial English curricula in the Riverside Unified School District where the study was conducted indicates that the curricula in these types of classes differ significantly. The regular English class emphasizes literature, grammar, and writing with stress on development of metacognitive strategies for learning from literary texts, higher level reasoning skills, more abstract vocabulary and knowledge that is beyond students' experiences. The remedial English courses rely on workbook type of materials that contain texts on "life-tasks," mostly consumer-type reading, such as reading advertisements, recipes, and application forms. The instructional emphasis is on literal reading, use of familiar vocabulary, and knowledge that occurs within students' experiences. Writing instruction in these classes emphasizes spelling and punctuation, basic sentence patterns, and "survival" exercises that involve learning how to fill out various forms.

Although we could not find any studies similar to the one we were undertaking, we are familiar with a related study that compared two types

of curricula on development of inferential reading ability at the elementary level (Singer, McNeil, and Furse, 1983). In that study, conducted in the Los Angeles Unified School District, which has some 460 elementary schools, we matched schools on the basis of socioeconomic status, ethnic distribution, and geographic location. The paired schools differed significantly on inferential comprehension at the sixth grade level. Then, as we had predicted, we found that the schools with the higher inferential comprehension had the broader curriculum that covered not only development of basic skills, but also science, social studies, literature, and fine arts. The schools with the narrower curriculum stressed mostly basic skills of reading, writing, and arithmetic. Thus, our findings supported the hypothesis that schools with the broader curriculum did more to develop the knowledge resources required for inferential reading than did the schools with the narrower curriculum.

Remedial Reading Hypothesis Tested in This Study

A basic assumption of the high school remedial English class is that in comparison with placement in a regular English class it is a more effective way of preparing students to pass the school district's reading competency test. We did not question whether this assumption would be valid for students in the reading acquisition phase of reading development; we only questioned its validity for students who were beyond this phase of reading development.

Subjects

In cooperation with the School District's Director of Research and Evaluation, we identified all students who had failed the district's reading competency test but who were beyond grade 5.5 on its standardized reading test, the Comprehensive Tests of Basic Skills.

Although we would have preferred to randomly assign students to a remedial class or a regular English class to obtain equivalent groups, we had to follow district policy and allow the students' parents to determine placement of their children. This procedure resulted in the two treatment groups.

Since the self-selection procedure may have resulted in systematic bias, we compared the two groups on their reading competency pretest scores and found they were not significantly different, as shown in Table 2. Thus, on this criterion, the self-selection procedure did not result in non-equivalent groups.

Procedures

The remedial English teachers received printouts of the objectives on the reading competency tests that each student had passed or failed. They could use these objectives for developing individualized instructional plans for each student. These objectives included both academic and life tasks.

The regular English teachers followed their normal instructional program of literature, grammar, and writing. They did not know that some of their students had failed the district's reading competency test.

At the next administration of the district's reading competency test, students from both placements took the test again. They had experienced one full year of instruction in the tenth grade in remedial English or in regular English classes.

Results

The test results are shown in Table 2. Although the sizes of the samples were relatively small, they were still large enough for statistical analysis. A t-test indicated that the difference was statistically

significant ($t=2.05$, $df=44$, $p<.05$). The odds were 19 to 1 that this difference could have been due to chance.

The correlation between the reading competency pretests and posttests were negligible ($r=.08$). This negligible relationship means that changes in scores on the posttest could not have been predicted from the pretest scores. The changes in the scores had to be attributable to other factors, such as differences in the intervening instruction.

Analysis of differences in the gain scores indicated they were skewed in favor of the students in the regular English classes. Their gain scores ranged from scaled scores of +2 to +38 points with a median gain of 16. The scaled score differences for the remedial English students varied from -43 to +44 with a median gain of +12 points.

Table 2. Comparison of Remedial Students in Regular versus Remedial English Classes on the School District's Reading Competency Test

Class	N	Reading Pretest		Reading PostTest		Difference	
		Mean	SD	Mean	SD	Mean	SD
Remedial	32	135	10	146	14	11	17
Regular	14	137	10	155	9	18	12

Difference between posttest means are significant, $p<.05$.

More remedial students in the regular English class than in the remedial English class passed the school district's reading competency test at the end of the school year, as shown in Table 3. However, the difference was not statistically significant (chi square = 1.2, df 1, p = .27). Thus, the remedial hypothesis that more of the students who had failed the reading competency test would benefit from remedial than from regular

classroom instruction was not tenable.

Table 3. Number of Students in Remedial and Regular English Classes Passing and Failing the School District's Reading Competency Test

Class	Pass	Fail	Total
Remedial	18	14	32
Regular	11	3	14
Total	29	17	46

Difference is not statistically significant, $p = .27$.

Discussion

Our results do not support the remedial hypothesis in two ways. First, the students in the regular English classes as a group achieved at a significantly higher level than the students in the remedial English classes on the school district's reading competency test at the end of the year. Second, if the remedial hypothesis were tenable, then we would expect more students in the remedial English classes to pass the school district's reading competency test after a year of concentrated instruction than students in the regular English classes. However, the differences were not statistically significant. In fact, there was a tendency for more of the students in the regular English classes to pass the reading competency test at the end of the year. Thus, neither analysis supported the remedial hypothesis.

Another claim made for remedial English classes is that they result in a better adjustment for students than would placement in the more competitive environment of the regular English class. However, our analysis of the data for our two groups did not support this claim. There

was no advantage for either group in grades, failure rates, or perseverance. After one semester, our sample of students in the regular English classes earned a grade point average of 1.245, slightly below a D+, while our sample students in the remedial English class attained a grade point average of 1.456, slightly above a D+. An equal number of our sample of students (5) got grades of F in both types of classes. Four of our sample of students withdrew from the regular English classes, while two students in our sample dropped their remedial English class. Thus, our data indicate that our sample of students did not earn significantly lower grades when they enrolled in the more rigorous English classes and they did not fail with greater frequency.

Although the remedial English teachers could have conducted diagnostically-based instruction, our interviews indicated they all tended to teach their classes as though they were homogeneous. The teachers in the three high schools where the remedial classes were conducted tended to use workbook type of materials for all the students. The materials required students to read and answer a series of questions related to paragraphs on life tasks, such as reading bills, television logs, and registration forms, and in "survival" type of reading, such as reading medicine labels, menus, and maps. Most of the questions on the comprehension tests were at the literal level. Students got some practice on specific reading skills, such as selecting main ideas, following sequence, and making simple inferences. They read short passages and answered questions on them, such as identifying the main idea. They also got some practice in "survival" writing; they filled out forms, such as voter registration forms, rebate certificates, and insurance applications. They got instruction and practice in punctuation, grammar, and writing basic sentence patterns, but not in writing essays.

The regular English teachers also treated their classes as though they were homogeneous. All students got the same literature, grammar, and writing assignments. The literature program consisted of classical works and contemporary novels; the writing assignments were lengthy essays. Students were taught to read critically and analytically and to write cogently and coherently.

Why did the remedial English classes not make a significant difference? We know that on a theoretical level, students who are beyond the reading acquisition phase of reading development can improve in their reading performance by increasing their general knowledge, cognitive and metacognitive processes, and vocabulary ability. We infer that the regular English classes tended to provide this instruction more so than the remedial English classes because of the more challenging materials, the greater demands the texts and teachers made on readers' resources, expectations for higher achievement, and instruction on reading more complex texts and expressing ideas in essay form.

We also entertained alternative explanations, but could not test them. The students who elected to take the regular English classes may have been more motivated and perhaps had more confidence in their ability to learn in this setting. We do know that they tended to receive the lower grades in their classes which may have countered their motivation and adversely affected their self-confidence.

We would not, of course, generalize the findings in this study to all remedial English vs. regular English classes. Indeed, we would like to know the consequences of various kinds of treatments. For example, what would have been the result if the teachers in the regular English classes had used teaching strategies that took individual differences among their students into account or if the remedial English

teachers had used diagnostically-based approaches to their reading instruction (Singer and Donlan, 1985)? These questions remain to be answered in subsequent studies.

If a sample is small but the effect size is statistically significant, then it can be inferred that the treatment was rigorous. Our results indicate that the remedial English classes did not provide an improvement treatment that favored remedial English class instruction. In fact, it was the treatment in the regular English classes that effected a statistically significant difference for the remedial readers. There was also a tendency for more of the students in the regular English classes than in the remedial English classes to pass the school district's reading competency test at the end of the year.

Although the sizes of our samples are small, our confidence in the results is enhanced because we had predicted the outcomes. Also, they are consistent with related research and with our theoretical analysis of the kind of instruction that is likely to improve the reading performance of students who are beyond the reading acquisition level of reading development.

Conclusion

If students are beyond the reading acquisition phase of reading development, which we defined by consensus as a reading grade equivalency on a standardized reading test of grade 5.5, but did not pass their school district's reading competency test that has a reading grade equivalent of 8.8, they are more likely as a group to benefit from placement in a regular English class than in a remedial English class that does not provide diagnostically-based instruction. Also, they tend to be more likely than students in the remedial English class to pass the reading competency test

after one year of instruction. Thus, our data do not support the hypothesis that remedial English classes are a more effective way of improving the reading performance of students who had failed the school district's reading competency test but are beyond the reading acquisition phase of reading development.

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A Course-Based Model for Proficiency Assessment

The model used throughout the country for proficiency assessment is the single test for assessing basic skills. Students who fail a proficiency test may then take a remedial course.

In contrast, San Diego Unified School District has adopted a course-based model. Although the district could have limited proficient courses to English and mathematics, it wanted students to be proficiency in other content areas, such as social studies and science, as well. Consequently the district has had teachers in each of the 23 courses required for graduation decide on criteria for determining whether a student has completed proficiency requirements related to a particular course. Passage of the course also means that the student has passed the proficiency requirements for the course. Parents are called to a conference whenever a student fails any course. The remedy is to retake the course; if necessary, with additional help. Some students may also elect to take additional remedial work. Course requirements for graduation and satisfying proficiency requirements are congruent. The anomaly of having students pass course requirements but fail competency tests and therefore be ineligible for a diploma cannot occur in San Diego's course based model.

Data on San Diego's Old and New Proficiency Programs

San Diego has eight categories of ethnic groups. These include Hispanic, White, Black, Asian, American Indian, Pacific Islands, Portugal, Filipino, and Indo-Chinese. The number and percentage of students in each ethnic group appear in Table 1. However, for economical reasons, we only analyzed the data for the four largest groups in California: Hispanic, White, Black, and Asian.

Table 1. Number and percentage of students in each ethnic group

	Number*	Percentage
Hispanics	1492	18.1
White	3915	47.9
Black	1346	16.4
Asian	207	2.5
Amer. Indian	26	0.3
Pacific Is.	31	0.4
Portugal	36	0.4
Filipino	532	6.5
Indo-Chinese	638	7.8

	8223	

(Records missing ethnic identification: 651.)

The table indicates that Whites are not a majority in the San Diego Schools. Hispanics and Blacks constitute about 35 percent of the students. The next two largest groups are Filipinos, a reflection of San Diego's naval base, and Indo-Chinese, relatively recent immigrants.

These data are for students who were in the 10th grade in 1986-87. They had taken the proficiency tests under the former single-test model, the district's standardized test, Comprehensive Tests of Basic Skills, and were just beginning the course based model for assessing proficiency. They will not be held for proficiency assessment under the course based model if they have already passed the proficiency test under the single-test model. But those who did not pass the single-test model will come under the

requirements for the course-based model. Thus, this group represents a transitional cohort of students.

How many students passed proficiency tests when they were first administered in grade 8?

The data shown in Table 2 indicates that the Asians and Anglos had the highest percent while the Blacks and Hispanics had the lowest percent. It also shows that a large number of all four groups failed the tests; more than 50 percent of the entire class.

Table 2. Passing percentages on competency tests for four ethnic groups assessed in the eighth grade

	Whites	Asians	Blacks	Hispanics	
Reading	61	60	27	34	
Writing	30	28	18	18	
Mathematics	42	58	16	23	
Total No.*	2740	162	973	1025	= 4900

*Total number varies somewhat from test to test.

The table indicates that the percentage of Whites and Asians are about equal on all tests, except that the Asians excel on mathematics. The Hispanics and Blacks have a much lower percentage rate on all tests, less than 35 percent pass any test. More Hispanics than Blacks pass reading and mathematics tests.

The reading test is easiest and the writing test the most difficult. However, the ease or difficulty of the test is only a reflection of the

nature of the tests and the standards adopted by the district. That is, we would not generalize that reading is easier and writing more difficult because we could construct tests and set standards that would reverse the status of these tests.

What is the relationship between passing the competency tests and performance on the Comprehensive Tests of Basic Skills? The data in Tables 3, 4, and 5 show the stanine scores on the CTBS of the students who pass and fail the corresponding competency test.

Table 3. Stanine Scores on CTBS Reading Subtest of Students Who Pass or Fail the School District's Reading Competency Test

		Reading Competency		
CTBS Reading Stanine		Fail	Pass	
1		1.77	0.30	
2		5.42	0.55	
3		8.70	1.13	
4		9.53	2.59	
5		14.89	9.49	
6		7.38	12.85	
7		2.23	7.57	
8		0.77	8.12	
9		0.55	6.17	
Total	Percent	51.23	48.77	100
	Number	2409	2293	4702

The two columns indicate that students who fail the district's competency test in reading (51.23 percent failed) can obtain high scores on the CTBS and vice-versa. If stanine 5 on the CTBS is set as a passing

score, then approximately 23 percent who failed the district's test would pass on the CTBS while about 5 percent who passed the district's test would have failed on the CTBS. These differences are due to variations in the reliability and validity of the tests.

We have more dramatic differences on the writing tests. Those who failed the district's writing test would pass by getting scores over at stanine 5 or higher on the CTBS Language Expression. Only about 3 percent who pass the district's test would fail on the CTBS. In other words, the district's test fails significantly more students than the CTBS would fail. Of course, they are somewhat different tests. The district test has students use information to construct an essay whereas the CTBS has a multiple choice for aspects of language expression.

On mathematics, some 42 percent who failed the district's math test would pass the CTBS at stanine 5 or higher. Only about 1 percent who passed the district's math test would fail on the CTBS.

Thus, the data indicate that the district's competency tests were more difficult to pass than the comparable CTBS test when stanine 5 on the CTBS is the cutting score. The data also reveal that students who failed on the district's competency test would have passed on the CTBS and vice versa. Which test result should the district use? We think that the district should lean in the direction of the student by allowing students to use either test for passing the proficiency requirements.

How would students fare under the course based model?

Student grades are only available up to the first half of the tenth grade. We cannot answer this question until grades are available in all 23 courses required for graduation.

However, the present course data indicates that San Diego has a 10 to

12 percent failure rate. We would expect the failure rate for courses to be lower than for failure on the proficiency tests. Why? In the course-based model, D- is still passing. Also students are assessed on specific instruction in the course and therefore can learn what they need to know to pass tests in the course. The competency test standard is set at about the 50th percentile level. Also, the test is based upon general ability and instruction in previous courses. Therefore, the single test model is more difficult over the short run than the course based model.

How do the test model and course-based model compare?

The test model requires administration of a specific test that takes one school day to administer and is based on general knowledge. Students who fail the test take a remedial course related to the objectives of the test which are on academic and life-tasks. Thus, additional costs are entailed in administering the test and in offering the remedial courses.

In contrast, the course-based model incorporates testing as part of normal class instruction. Remediation consists of retaking the course. Therefore, the curriculum does not change for students who fail the course and fail the proficiency assessment included in the course.

We can evaluate these two programs according to criteria of economy, equity, and quality.

The test based model is costly because it requires a school day to administer the test. Additional costs are entailed in scoring and processing test scores. It is only equitable if all students have had equal opportunity to learn the content and processes on the test. Although schools have tried to make sure that the tests have curricular and instructional validity, it is questionable whether all students had school instruction on life-task questions that appear on many proficiency tests.

To the extent that the tests lack curricular validity, to that extent the test is inequitable. The quality of instruction may decrease in remedial classes because differential diagnosis and instruction do not occur in them. Indeed some students in remedial courses who are beyond the acquisition level in reading, perhaps in writing and arithmetic also, would benefit more from placement in regular classes, such as English, than in remedial classes.

The course based model tends to satisfy all three criteria. It is more economical to assess students in a course than to take a school day to test all students within a particular grade. Separate records do not have to be kept for proficiency testing and course grades. The course-based model is more equitable because all students have equal opportunity to learn the course content and processes that will be on the proficiency test for the course. The quality of courses is likely to be improved because instructors in these courses have had to explicate their curricula for developing the objectives on the proficiency assessment. They have also equated their criteria for grading courses.

Thus, San Diego has incorporated proficiency assessment into its regular program and in the process has improved its courses. Whether the improvement will be maintained and whether students' basic skills will benefit from the program are questions that can only be answered some two to three years from now when the initial group of students will have completed the program.